

## **Psychopathic Traits in Relation to Suicide Ideation in Male and Female Undergraduate Students: A Structural Equation Modeling Approach**

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Previous studies suggested a link between psychopathy and suicide attempt and current suicide ideation among inmate population (Conner, Meldrum, Wieczorek, Duberstein, & Welte, 2004; Douglas, Lilienfeld, Skeem, Poythress, Edens, & Patrick, 2008; Pennington, Cramer, Miller, & Anastasi, 2015). However, this link is less likely focused among students. Present study uses cross-sectional method for data collection. Structural equation models of Levenson's Self-Report Psychopathy-Revised Urdu Version (LSRPS-RUV, 2018) in relation to suicide ideation were presented and tested to find out a direct relationship between the three dimensions of the scale and suicidal ideation. For this purpose, five latent variables were identified: egocentricity, callous, antisocial factor, and suicidal ideation. Current results revealed that antisocial factor of LSRPS-RUV were significantly positively linked to the current suicidal ideation in total sample. To analyse the gender differences for this relationship, further SEM was estimated for both male and female students separately. Callous factor was significantly negatively related to suicide ideation while antisocial factor was significantly positively related to suicide ideation only in male students. However, no relationship has been found among three factors of LSRPS-RUV and current suicide ideation in female students.

**Keywords:** antisocial factor; Callous; Egocentricity; Psychopathy; Suicide ideation

Suicidal ideation and suicidal attempts are very common among young people around the globe. According to World Health Organization (WHO, 2006), a person dies every 40 seconds around the world. The annual report of Center for Disease Control (CDC, 2014) revealed 40,000 deaths in USA and one million deaths around the world occurred by suicide (Franklin et al., 2017). Borges, Angst, Nock, Ruscio, & Kessler, (2008) reported that 140 million people having suicide ideations and 25 million people who attempted suicide existed worldwide (Crosby, Gfroerer, Han, Ortega, & Parks, 2011; Franklin et al., 2017). The rates of suicide are high in Eastern Europe, low in Central and South America and moderate in Asia and Western Europe (Bakht, Saeed, Ahmed, & Noushad, 2017).

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Contribution of Authors

1. Second Author Sobia Sahibzada collected data
2. Third Author Daniel Boduszek, contributed to the design and implementation of the research.

Recently, adolescent's suicide is becoming a serious health issue. According to the most recent findings, 18% adolescents (9-12 grades) reported suicidal ideation in the last year. It is estimated that 15% adolescents made plan for suicide and 9% attempted suicide (CDC, 2016). WHO made a Mental Health Plan Action which helped decrease suicide rates by about 10% internationally (LeCloux, Culp, O'Brien, Wolff, & Andrade, 2017). Ferguson (1995) found 34% of high school student who experienced suicidal ideation. In other study 62.6% students of high school reported suicidal ideation over their life time (Rudd, 1989).

Rudd (1989) examined suicide ideation among college students (N= 737). Sample of the study was comprised on both males (n= 287) and females (n= 450) with ages ranging from 16-30 years using Suicidal Ideation Scale (SIS; Rudd, 1989). SIS indicated very good reliability ( $r = .86$ ). Results indicated 43% of the students reported suicidal ideation in the course of last 12 months and 55% were found to have attempted suicide once in their lives.

Research showed the relationship between suicidal thoughts and suicidal attempts. Suicidal thoughts are the interpreters of suicide. According to research findings, 25 % to 58% individuals attempted suicide and 7% expired by suicide (Kessler et al., 1999; Brezo et al., 2007). Adolescents and young adults were more prone towards suicidal ideation and prevalence rates of suicide thoughts were 5% to 70% (Brezo et al., 2007).

Many studies have investigated suicide in relations to age, gender, family setting and socioeconomic status among adolescents. They found age, single parent family and smoking as significant risk factors for suicide ideation (Fuller-Thomson, Hamelien & Granger, 2013) Elgin (2014) conducted a longitudinal research on students of age 19 to 23 years. Suicidal Ideation Questionnaire Junior (SIQ- Junior; Reynolds, 1988) was utilized to assess suicidal ideation. Results revealed that suicidal ideation was significantly related to depression and substance abuse.

Zong (2015) assessed suicidal ideation in South Korean high school students (N= 60). Suicidal Ideation Questionnaire (SIQ; Reynolds, 1985) was used to investigate suicidal ideation. Suicide ideation was prevalent among 37% students. Family problems, friendship harms, and educational issues were significantly related to suicide ideation.

Previous research revealed many risk factors for suicide i.e., mood disorder, personality disorder, and substance abuse in general population (White et al., 2002). In prison inmates, many studies demonstrated other variables such as long sentence, hopelessness, overcrowding, and trauma experienced as significant predictors of suicide ideation and behaviour. It is suggested by previous researchers that psychopathic characteristics that are eminent within prison inmates (Brinkley, Schmitt, Smith, & Newman, 2001; Shagufta, 2018) traditionally evident as protective factors against suicide due to egocentricity and callousness that are common among psychopaths (Cleckley, 1988). However, antisocial and impulsive factor of psychopathic traits have been found as a risk factor for suicide among prison population (Douglas, Herbozo, Poythress, Belfrage, & Edens, 2006; Swogger, Conner, Meldrum, & Caine, 2009; Verona, Patrick, & Joiner, 2001). Psychopathy is multidimensional construct that consists of different facets (Karpman, 1948), each of which might be differently linked to suicidal ideation.

Initially, psychopathy was conceptualized as a two-factor model: primary psychopathy and secondary psychopathy (Blackburn, 1975; Karpman, 1948; Levenson et al., 1995). Primary psychopathy arises due to the genitive influence and comprises of callousness, lack of remorse,

egocentrism, and lack of empathy (Cleckely, 1988; Karpman, 1948) and linked to decrease negative emotionality, fearfulness, anxiety, and stressful stimuli (Patrick, Bradley, & Lang, 1993; Sutton, Vitlae, & Newman, 2002; Hicks & Patrick, 2006; Verona et al., 2001). Secondary psychopathic traits arise due to environmental influences such as traumatic events, childhood abuse, thrill seeking and impulsivity (Hicks, Markon, Patrick, Krueger, & Newman, 2004) and linked to higher negative emotionality such as anxiety, depression, antagonism, aggression and substance abuse (Hicks & Patrick, 2006; Skeem, Johansson, Andershed, Kerr, & Loudon, 2007; Verona et al., 2001). As psychopathy is comprised of distinct dimensions, it is suggested that primary and secondary psychopathy are differently associated with suicide ideation. It has been found that primary psychopathy is negatively or not associated with suicide attempts and current suicide ideation (Douglas, Herbozo, Poythress, Belfrage, & Edens, 2006; Douglas, Lilienfeld, Skeem, Poythress, Edens, & Patrick, 2008; Swogger et al., 2009; Verona, Hicks, & Patrick et al., 2005; Verona et al., 2001). However, secondary psychopathy has been significantly positively linked to history of suicide attempts and suicide ideation (Douglas et al., 2006; Douglas et al., 2008; Swogger et al., 2009; Verona et al., 2005; Verona et al., 2001).

Recently, psychopathy is conceptualized as three-dimensional construct (Brinkley et al., 2008; Sellbom, 2011, Shagufta, 2018). To examine the psychopathic traits in relation to risk factor for suicide, it is important to incorporate three dimensions of psychopathy for better understating because previous studies were focused only on two dimensions of psychopathy. Impulsivity and antisocial behaviour as a central to secondary psychopathy were found as a significant risk factor for suicide ideation while egocentricity and lack of remorse as dominant to primary psychopathy as protective or not related to suicide ideation.

### **Current Study**

Previous research suggested that psychopathic individuals are more vulnerable to develop suicidal ideation (Cleckley, 1988) both in incarcerated and general population (Swogger et al., 2009). Social and criminological literature remained focused on two dimensional model of psychopathy rather than three dimensions in relation to suicide ideation. Empirical support for the interaction between three dimensions of psychopathy and suicide ideation is missing. Therefore, it was hypothesized that egocentricity and callous factor of psychopathy would be negatively linked to current suicide ideation while antisocial factor would be positively related to current suicide ideation. Further, it was hypothesized that this relationship would be more prominent among male as compared to female students. In the past, a wealth of research demonstrated to find out the suicidal ideation, suicide behaviour, and completed suicide in Pakistani population (Bakht et al., 2017; Khan, 2017) but till date no study has been focused to evaluate the role of psychopathy in relations to suicidal ideation in non-clinical non-incarcerated population.

## **Method**

### **Participants and Procedure**

Total sample of the study was comprised of 600 undergraduate students. Half of them consisted of males (n=300) and half of them females (n= 300). The age range of the respondents was between 17 and 22 years. Project approval was taken from the Advanced Studies Review Board (ASRB) of Shaheed Benazir Bhutto Women University Khyber Pakhtunkhwa (KPK). Sample was recruited from different colleges and universities in Peshawar KPK by using purposive sampling technique. Inform Consent was taken from participants and they were assured that the data will be kept confidential and the information collected from them will be used only for research purposes. Participation of the subjects was voluntary and they were allowed to quit at any point. A booklet

consisted of Levenson Self Report Psychopathy Scale-Revised Urdu Version (LSRPS-RUV; Shagufta, 2018) and Suicidal Ideation scale (SIS; Rudd, 1989) along with demographic sheet was provided to the participants and briefed about the purpose of the study. College and university students under or above the age range i.e.18-25 years and having any physical or psychological disability during past years were excluded from the study.

### Analysis

Cross-sectional research method was used for data collection. Structural Equation Modelling (SEM) was tested and estimated for total, male, and female samples separately. SEM is an advanced data analytics technique for measuring and testing of theoretical construct. Structural equation model is consisted of two methods; Path Analysis (PA) and Factor Analysis (FA). PA pictorially demonstrates a link between observed variables in a path diagram while FA is a technique used to decrease a large number of variables into smaller number of factors. PA technique measures the direct, indirect, and total effects of observed variable on another to be acquired. This method is very useful because it simultaneously assesses the both factor loadings and the relationship between latent variables (McCallum and Austin, 2000). For the current study total four latent variables were identified: egocentricity, callous, antisocial factor, and suicide ideation.

### Measures

**Levenson's Self-Report Psychopathy Scale Revised Urdu-Version (LSRPS-RUV; Shagufta, 2018):** To collect the data, a recently validated Levenson's Self-Report Psychopathy Scale Revised Urdu-Version (LSRPS-RUV; Shagufta, 2018) was used. Its 19 item five-point Likert scale validated on the basis of Levenson's Self-Report Psychopathy Scale (LSRPS; Levenson, Kiehl, & Fitzpatrick, 1995). Some items are reversely scored to avoid response biases.

**Suicidal Ideation Scale (SIS; Rudd, 1989):** SIS was used to assess the suicide ideation. It is a total 10 items uni-dimensional scale. SIS was translated from English to Urdu by the help of a supervisor and other researchers. Urdu translated version along with an original English version was given to the two professors for further suggestions.

**Demographic information:** Demographic sheet was used to collect the information related to the age, gender, and socio economic status.

## Results

### Descriptive Statistics

Table 1 revealed descriptive statistics which included mean, standard deviation, and Cronbach's Alpha Reliability (Cronbach, 1951) for three subscales of Levenson's Self-Report Psychopathy Scale-Revised Urdu Version (LSPS-RUV) and Suicidal Ideation Scale (SIS). These measurements displayed that undergraduate students demonstrate high levels of Egocentricity, moderate level of Callousness and Antisocial behaviour. Results also indicated moderate level of current suicidal ideation among students. Present results shows that the Egocentricity ( $\alpha = .86$ ) and Antisocial factor ( $\alpha = .79$ ) possess good internal consistency. However, the internal consistency for Callous scale is  $\alpha = .63$  though, the values larger than .60 are usually considered satisfactory (Bagozzi & Yi, 1988; Diamantopoulos, 2006). Present results indicated that Suicidal ideation scale is highly reliable scale ( $\alpha = .90$ ) among undergraduate students.

**Table**  
*Mean, Standard Deviation and Cronbach's Alpha*

Variable	M	SD	Cronbach's Alpha
Egocentricity (EC)	27.17	6.28	.86
Callous (CA)	14.03	3.26	.63
Antisocial (AS)	13.60	3.45	.79
Suicidal Ideation (SI)	13.11	6.24	.90

**Table 2**  
*Correlation between three latent factors of Levenson's Self-Report Psychopathy Scale Revised Urdu Version (LSRPS-RUV)*

Latent Factors	EC	CA	AS
Egocentricity (EC)	---		
Callous (CA)	.30**	---	
Antisocial (AS)	.22**	.25**	---

Note: All correlations are significant at  $p < .01$

Table 2 shows correlations among the three latent factors of LSRPS-RUV which indicated that the three subscales are moderately significantly correlated. The correlation between Egocentricity and Callous factor is  $r = 0.30$  and between Callous factor and Antisocial factor is  $r = 0.25$ . However, Correlation between Egocentricity and Antisocial factors ( $r = 0.22$ ) is comparatively weak.

**Table 3**  
*Standardized and unstandardized regression paths (with standard errors) for the specified measurement model and structural model (N=600)*

Item	B	B	SE
<b>Measurement Model</b>			
<b>Factor 1 (Egocentric)</b>			
1. Success is based on survival of the fittest; I am not concerned about the losers	1.00	.58***	.06
2. For me, what's right is whatever I can get away with.	1.00	.61***	.06
3. In today's world, I feel justified in doing anything I can get away with to succeed.	1.00	.64***	.07
4. My main purpose in life is getting as many goodies as I can.	1 1.00	.57***	.06
5. Making a lot of money is my most important goal.	1.00	.64***	.05
6. I let others worry about higher values; my main concern is with the bottom line.	1.00	.63***	.06
7. People who are stupid enough to get ripped off usually deserve it.	1.00	.62***	.07
8. I tell other people what they want to hear so that they will do what I want them to do.	1.00	.67***	.06
9. I often admire a really clever scam.	0.95	.56***	.06
10. I enjoy manipulating other people's feeling.	1.00	.69***	.06
<b>Factor 2 (Callous)</b>			

1. I make a point of trying not to hurt others in pursuit of my goals.	1.00	.85***	.04
2. I feel bad if my words or actions cause someone else to feel emotional pain.	0.67	.63***	.04
3. Even if I were trying very hard to sell something, I wouldn't lie about it	0.85	.75***	.04
4. Cheating is not justified because it is unfair to others.	1.00	.42***	.04
<b>Factor 3 (Antisocial)</b>			
1. I find myself in the same kind of trouble, time after time.	1.00	.68***	.06
2. I am often bored.	1.00	.70***	.05
3. I quickly lose interest in tasks I start.	0.94	.63***	.06
4. I have been in a lot of shouting matches with other people.	0.76	.58***	.06
5. When I get frustrated, I often "let off steam" by blowing my top	1.00	.67***	.03
<b>Suicidal Ideation</b>			
1. I have been thinking of ways to kill myself.	1.00	.64***	.05
2. I have told someone I want to kill myself.	1.00	.67***	.06
3. I believe my life will end in suicide.	.72	.66***	.04
4. I have made attempts to kill myself.	.83	.63***	.05
5. I feel life just isn't worth living	1.00	.63***	.06
6. Life is so bad I feel like giving up.	1.00	.78***	.05
7. I just wish my life would end.	1.00	.78***	.05
8. It would be better for everyone involved if I were to die.	.94	.59***	.06
9. I feel there is no solution to my problems other than taking my own life.	1.00	.79***	.04
10. I have come close to taking my own life.	1.00	.75***	.04
<b>Structural Model</b>			
Egocentric → Suicidal Ideation	-.01	-.01	.05
Callousness → Suicidal Ideation	-.04	-.04	.04
Antisocial Factor → Suicidal Ideation	.13	.14***	.04

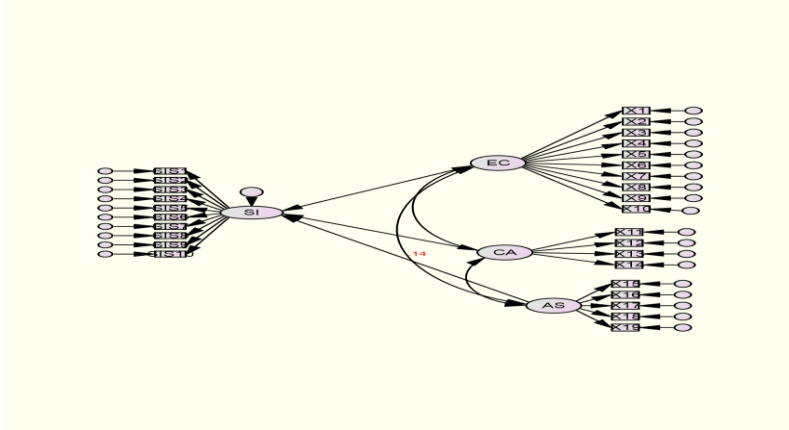
Note:  $\chi^2(375) = 952.7, p < .001$ ; CFI = .91; TLI = .90; RMSEA = .05; RSMRS = .04

At measurement level, the appropriateness of the three-factor model of LSRPS-RUV was specified. CFA analysis exhibited satisfactory fit of the data (CFA = .91, TLI = .90, RMSEA = .05 and SRMR = .04). The applicability of the three-factor model of LSRPS-RUV was further supported by the estimates shown in Table 3. All items displayed statistically significant ( $P < .001$ ) factor loading. Additionally, all factor loadings revealed the anticipated direction.

Table 3 represents the standardised and unstandardized values for the three-factor model of criminal social identity along with the suicidal ideation on the specified structural model. Results showing that observed variables are significantly linked to latent factors.

To see overall model fit, structural level is analysed. All the direct paths from the three factors of LSRPS-RUV to suicide ideation are included. Results revealed a significant positive relationship exists between antisocial factor and suicide ideation ( $\beta = -.14, p < .001$ ). However, no significant link has been yielded among other variables included in the model.

**Figure 1**  
SEM Model for LSRPS-RUV and Suicidal Ideation Scale



**Table 4**  
Standardized and unstandardized regression paths (with standard errors) for the specified measurement model and structural model for male students (n=300)

Item	B	B	SE
<b>Measurement Model</b>			
<b>Factor 1 (Egocentric)</b>			
11. Success is based on survival of the fittest; I am not concerned about the losers	1.00	.51***	.06
12. For me, what's right is whatever I can get away with.	.99	.54***	.06
13. In today's world, I feel justified in doing anything I can get away with to succeed.	1.00	.63***	.07
14. My main purpose in life is getting as many goodies as I can.	1	.49***	.07
15. Making a lot of money is my most important goal.	1.00	.61***	.07
16. I let others worry about higher values; my main concern is with the bottom line.	1.00	.56***	.08
17. People who are stupid enough to get ripped off usually deserve it.	1.00	.58***	.07
18. I tell other people what they want to hear so that they will do what I want them to do.	1.00	.66***	.06
19. I often admire a really clever scam	0.96	.66***	.08
20. I enjoy manipulating other people's feeling	1.00	.66***	.06
<b>Factor 2 (Callous)</b>			
5. I make a point of trying not to hurt others in pursuit of my goals	1.00	.88***	.02
6. I feel bad if my words or actions cause someone else to feel emotional pain.	0.67	.66***	.06
7. Even if I were trying very hard to sell something, I wouldn't lie about it	0.78	.73***	.06
8. Cheating is not justified because it is unfair to others.	1.00	.42***	.04
<b>Factor 3 (Antisocial)</b>			
6. I find myself in the same kind of trouble, time after time.	1.00	.69***	.06
7. I am often bored.	1.00	.67***	.07
8. I quickly lose interest in tasks I start.	0.86	.58***	.08
9. I have been in a lot of shouting matches with other people.	0.76	.50***	.07

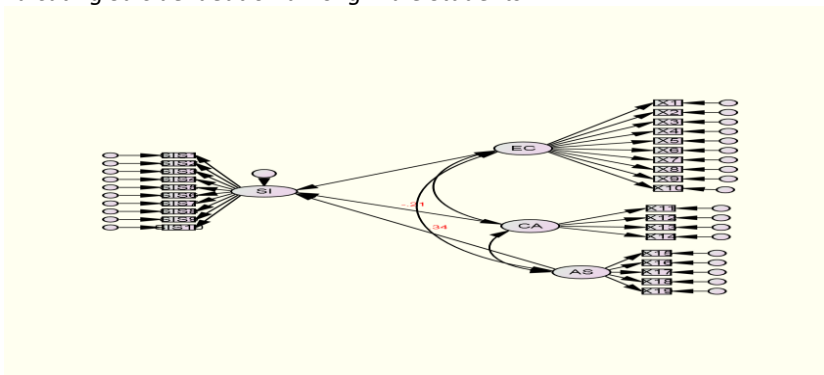
10. When I get frustrated, I often “let off steam” by blowing my top	1.00	.68***	.06
<b>Suicidal Ideation</b>			
1. I have been thinking of ways to kill myself.	1.00	.57***	.05
2. I have told someone I want to kill myself.	1.00	.62***	.07
3. I believe my life will end in suicide.	0.72	.66***	.05
4. I have made attempts to kill myself.	0.81	.61***	.06
5. I feel life just isn’t worth living	1.00	.62***	.06
6. Life is so bad I feel like giving up.	1.00	.79***	.07
7. I just wish my life would end.	1.00	.74***	.06
8. It would be better for everyone involved if I were to die.	0.94	.58***	.08
9. I feel there is no solution to my problems other than taking my own life.	1.00	.82***	.07
10. I have come close to taking my own life.	1.00	.81***	.05
<b>Structural Model</b>			
Egocentric → Suicidal Ideation	-.01	-.004	.07
Callousness → Suicidal Ideation	-.13	-.21**	.05
Antisocial Factor → Suicidal Ideation	.27	.34***	.06

Note:  $\chi^2(375) = 749.0, p < .001$ ; CFI = .91; TLI = .90; RMSEA = .05; RSMRS = .04

Table 4 indicates statistical analysis containing two stages: measurement level and structural level. In terms of the measurement level, three alternative model of LSRPS-RUV (Figure 2) were specified and estimated on Amos version 18 by using Confirmatory Factor Analysis (CFA) to evaluate the fit among the data and three-factor model of the scale. For comparison, goodness-of-fit indices were used. The Comparative Fit Index (CFI; Bentler, 1990) and the Tucker Lewis Index (TLI; Tucker & Lewis, 1973) are above .90 which indicates a better model fit. Additionally, Standardized Root Mean-square Residual (SRMR; Joreskog & Sorbom, 1986), and the root mean-square error of approximation (RMSEA; Steiger, 1990) values are .04 and .05 which indicated good model fit.

On structural level, relationship between latent variables is specified. For the purpose of the present study, three latent variables Egocentricity, Callousness, and Antisocial factor in relation to suicide ideation were identified. Results revealed a significant negative relationship between Callous factor and suicide ideation ( $\beta = -.21, p < .01$ ). Further, antisocial factor was significantly positively related with suicide ideation ( $\beta = .34, p < .001$ ).

**Figure 2**  
SEM Model indicating Suicide Ideation among Male Students





**Table 5**

*Standardized and unstandardized regression paths (with standard errors) for the specified measurement model and structural model for female students (n=300)*

Item	B	B	SE
<b>Measurement Model</b>			
<b>Factor 1 (Egocentric)</b>			
21. Success is based on survival of the fittest; I am not concerned about the losers	1.00	.62***	.07
22. For me, what's right is whatever I can get away with.	1.00	.66***	.08
23. In today's world, I feel justified in doing anything I can get away with to succeed.	1.00	.64***	.08
24. My main purpose in life is getting as many goodies as I can.	1 1.00	.67***	.08
25. Making a lot of money is my most important goal.	1.00	.66***	.07
26. I let others worry about higher values; my main concern is with the bottom line.	1.00	.70***	.08
27. People who are stupid enough to get ripped off usually deserve it.	1.00	.69***	.07
28. I tell other people what they want to hear so that they will do what I want them to do.	1.00	.67***	.07
29. I often admire a really clever scam.	0.93	.64***	.08
30. I enjoy manipulating other people's feeling.	1.00	.68***	.06
<b>Factor 2 (Callous)</b>			
9. I make a point of trying not to hurt others in pursuit of my goals.	.98	.67***	.08
10. I feel bad if my words or actions cause someone else to feel emotional pain.	1.00	.63***	.07
11. Even if I were trying very hard to sell something, I wouldn't lie about it	1.00	.77***	.07
12. Cheating is not justified because it is unfair to others.	1.00	.79***	.07
<b>Factor 3 (Antisocial)</b>			
11. I find myself in the same kind of trouble, time after time.	1.00	.68***	.07
12. I am often bored.	1.00	.73***	.08
13. I quickly lose interest in tasks I start.	0.87	.68***	.07
14. I have been in a lot of shouting matches with other people.	1.00	.66***	.06
15. When I get frustrated, I often "let off steam" by blowing my top	1.00	.66***	.07
<b>Suicidal Ideation</b>			
1. I have been thinking of ways to kill myself.	1.00	.69***	.06
2. I have told someone I want to kill myself.	1.00	.73***	.07
3. I believe my life will end in suicide.	.75	.67***	.05
4. I have made attempts to kill myself.	.83	.64***	.07
5. I feel life just isn't worth living	1.00	.62***	.08
6. Life is so bad I feel like giving up.	1.00	.76***	.06
7. I just wish my life would end.	1.00	.82***	.06
8. It would be better for everyone involved if I were to die.	.97	.61***	.08
9. I feel there is no solution to my problems other than taking my own life.	.97	.78***	.06
10. I have come close to taking my own life.	1.00	.72***	.06

**Structural Model**

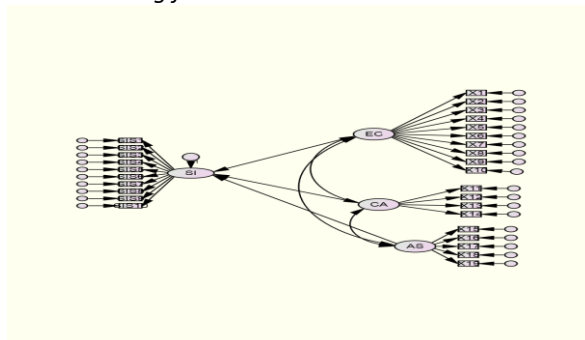
Egocentric → Suicidal Ideation	-.05	-.05	.07
Callousness → Suicidal Ideation	.05	-.05	.08
Antisocial Factor → Suicidal Ideation	.019	.020	.06

Note:  $\chi^2(375) = 733.6$ ,  $p < .001$ ; CFI = .90; TLI = .90; RMSEA = .04; RSMRS = .05

Table 5 shows factor loadings for female student sample. CFA standardized factor loading are .6 and higher which shows that half of the variance in the latent variables are explained by observed variable. Figure 3 indicated that model adequately fit the data,  $\chi^2 = 733.6$ ,  $df = 750$ ,  $p < .001$ ; CFI = .90, TLI = .90; RMSEA = .04, SRMR = .05. The structural level analysis indicated no significant relationship between three latent variables of LSRPS-RUV and Suicidal ideation in female sample.

**Figure 3**

SEM Model for Suicide Ideation among female students

**Discussion**

The present study was focused to investigate a link between psychopathic traits and suicidal ideation among students. Structural equation modelling was used to observe the relationship between the three factors of LSRPS-RUV (Egocentricity, Callous, and Antisocial) and suicidal ideation. Three different SEM were specified for total, male, and female samples. Results show that of the variables included in the models, the only positive significant relationship was found between antisocial factor and suicidal ideation for total sample and for male sample. Callous subscale was negatively linked to suicide ideation among male sample. However, no relationship has been found among three factors of LSRPS-RUV and suicide ideation in female sample.

In the present study, the three factors of LSRPS-RUV exhibited good internal consistency (Egocentricity = .86, Callous = .63, and Antisocial = .79) which is consistent with the previous study conducted by Brinkley et al., (2008): (*Egocentricity = .82, Callous = .69, and Antisocial = .63*). Additionally the reliability of current study is also consistent with the study of Sellbom (2011) who found good internal consistency for subscale of Egocentricity (.83), however, reliability for Callousness and Antisocial factors were below as expected (.61, and .62.). Furthermore, Shagufta (2018) found high reliability for three factors of LSRPS-RUV: Egocentricity = 0.97, Callous = 0.93 and Antisocial = 0.96 in inmate sample.

In the current study, Cronbach Alpha for Suicidal Ideation Scale is high (.90) which is in line with the previous study conducted by Rudd (1989) who found  $r = .86$  for SIS. Additionally, the present

study is also in line with the previous studies conducted by Wallack (2007) and Luxton, Rudd, Reger, & Gahm (2011) who found high reliability (0.91) for SIS.

Results indicated that Antisocial factor of LSRPS-RUV for total sample was significantly positively correlated with the suicidal ideation scale ( $\beta = .14, p < .001$ ) consistent with the study ( $\beta = .75$ ) conducted by Verona et al., (2001). Similarly, current results are also in line with the findings of Douglas et al., (2006) study who found the connection of Antisocial factor with suicidal behaviour among 12 different groups of sample by using different measures. Present study results are supported by Swogger et al., (2009) findings who found positive connection between antisocial factor and suicidal attempts.

Similarly, Smith, Selwyn, Wolford-Clevenger, and Mandracchia, (2014) found a relationship between antisocial dimension of psychopathy and suicidal ideation among criminals that are in line with present study.

Similarly, present results are consistent with the previous studies who found significant link between Antisocial factor of psychopathy and suicide ideation (Dhingra, Boduszek, Palmer, & Shevlin, 2015; Muller-Balazsfi, 2017).

In the present study a significant negative relationship ( $\beta = -.21, p < .01$ ) has been found between Callous factor and suicidal ideation in male sample which is consistent with Douglas et al., (2008) who found negative association between Callous and suicidal ideation. Current results are consistent with previous studies who found Callous trait as protective factor against suicide ideation. Similarly, Javdani et al., (2011) found negative correlation between Callousness and suicidal ideation ( $\beta = -.24, p < .01$ ). Present results are in line with the study of Forster, (2013); Issa et al., (2017) and Heirigs et al., (2018).

Previous studies found a strong link between behavioural indices of psychopathy and suicidal behaviour (Douglas et al., 2008; Patrick et al., 2005; Swogger et al., 2009; Verona et al., 2004). The present results are consistent with the above studies which revealed link between Antisocial factor of psychopathy ( $\beta = .34, p < .001$ ) and suicidal ideation in males.

In the present study no significant relationship has been found between the three factors of LSRPS-RUV and suicide ideation in female sample that are contrary to the study of Verona et al., (2005) who found significant positive relationship between antisocial factor of psychopathy and suicide attempts ( $\beta = .40, p < .01$ ) among female inmates of the Federal Correctional Institution in Tallahassee, Florida. Reason can be attributed towards the sample because current utilized undergraduate sample while previous study was conducted on female inmates.

## **Conclusion**

Previous literature suggested a considerable interest in the identification of subscales of psychopathy and its correlates over the past several years. Mostly studies have been focused on inmate sample to identify the subscales consistent with theoretical notions of primary and secondary psychopathy and its relation with suicide ideation and suicide behaviour. Present findings also extended prior work by investigation the role of three dimensions of psychopathy in association to suicide ideation. Keeping in mind the empirical and conceptual relationship between psychopathy and suicide ideation, we tested whether the three-subcales of the measure of LSRPS-RUV differently associated with suicide ideation. Literature provides evidence that interpersonal traits such as

grandiose, callousness, and sense of self-worth may buffer individuals against risk for developing suicide ideation. However, behavioural traits such sensation seeking, impulsive, and antisocial traits were found as significant risk factors for developing suicide ideation, and suicide behaviour in male population. Present results are consistent with the study of Verona et al., (2001), and Douglas et al., (2008). Consistent with previous evidence for the importance of these features in explaining the core concept of psychopathy, the current findings accentuate the significance of considering these features as essential characteristics of the psychopathic construct.

### Limitation and Suggestions

The current study has valuable contribution but there is no study without limitation. Therefore, present study has some limitations as well. First limitation is due to self-report method which has been used to collect the data. It is suggested that self-report method introduces response biases which might under or over report the responses. Secondly, only interested students have filled the questionnaire so naturally a proportion of students were excluded. Therefore, this limitation was unavoidable. Furthermore, to provide better understating of this construct, future study should be focused on psychopathy in relation to other psychological problems such as anxiety, depression, aggression, impulsivity, internalizing and externalizing problems.

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